**IN THE CLAIMS**:

Please amend claims 3-7, 9, 11, 14-18 and 22 as follows.

1. (Original) A method for network layer load balancing for a server farm system, wherein the server farm system comprises at least one router and two servers connected to each other with a communication link,

c h a r a c t e r i s e d in that the method comprises the steps of:

configuring a service-specific anycast address to the server interfaces on the communication link;

sending from a server which is ready for offering the service an advertisement message to all nodes on the communication link, the advertisement message comprising at least the service-specific anycast address and the link-layer address of the server;

receiving one or more advertisement messages from the server(s) with the router;

updating the neighbour cache entry in the router based on the information of the advertisement message(s); and

sending service queries to the servers according to the information in the neighbour cache entry.

2. (Original) The method according to claim 1, c h a r a c t e r i s e d in that the advertisement message sending functionality in the servers is activated by a solicitation message from the router.

3. (Currently Amended) The method according to claim 1 [[or 2]], c h a r a c t e r i s e d in that said updating of the neighbour cache entry is done by

changing the link-layer address of the neighbour cache entry to the adverted link-layer address received in the advertisement message.

4. (Currently Amended) The method according to ~~any of the claims 1 - 3~~ claim 1, characterised in that the Neighbour Discovery protocol is used wherein said solicitation message is a Neighbour Solicitation message and said advertisement message is an Unsolicited Neighbour Advertisement message where the override flag is set.

5. (Currently Amended) The method according to ~~any of the claims 1 - 4~~ claim 1, characterised in that the advertisement message is discarded in a router:

if an entry for the target address does not exist; or

if the neighbour cache entry is in a incomplete state; or

if the target's link-layer address in the received advertisement message is the same as the current link-layer address in the neighbour cache entry.

6. (Currently Amended) The method according to ~~any of the claims 1 - 5~~ claim 1, characterised in that the method comprises the steps of:

monitoring the advertisement messages on the link and the service process in the server; and

delaying the sending of a new advertisement message if necessary.

7. (Currently Amended) The method according to ~~any of the claims 1 - 6~~ claim 1, characterised in that if a server is not receiving any service queries in a predefined time interval:

stopping the sending of the advertisement messages; and

switching to the standby mode.

8. (Original) The method according to claim 7, c h a r a c t e r i s e d in that if a server being in the standby mode receives a solicitation message, the sending of the advertisement messages continues.

9. (Currently Amended) The method according to ~~any of the claims 1 – 8~~ claim 1, c h a r a c t e r i s e d in that when the service process in a server stops, sending of the advertisement messages is stopped.

10. (Original) The method according to claim 1, c h a r a c t e r i s e d in that the OSPFv6 protocol is used in the communication between the router and the servers.

11. (Currently Amended) The method according to ~~any of the claims 1 – 10~~ claim 1, c h a r a c t e r i s e d in that the method comprises the step of:

sending an advertisement message with route cost values suitable for the current situation in the server.

12. (Original) The method according to claim 11, c h a r a c t e r i s e d in that increasing the route cost value if the server providing the service is getting congested.

13. (Original) The method according to claim 11, c h a r a c t e r i s e d in that decreasing the route cost value if the server providing the service has capacity for new service queries.

14. (Currently Amended) The method according to claim 1, [[10, 11, 12 or 13,]] c h a r a c t e r i s e d in that the advertising message is an OSPFv6 Link State Advertisement message.

15. (Currently Amended) The method according to ~~any of the claims 1 – 14~~ claim 1, c h a r a c t e r i s e d in that method comprises the steps of:

recording all the advertisement messages with the router;

creating a cache for several link-layer addresses per neighbour cache entry; and

delivering the service queries to the servers in the cache in a predetermined way.

16. (Currently Amended) The method according to ~~any of the claim 1 – 15~~ claim 1, c h a r a c t e r i s e d in that the method comprises the step of:

sending an advertisement message with service load information.

17. (Currently Amended) The method according to ~~any of the claims 1 – 16~~ claim 1, c h a r a c t e r i s e d in that delivering the service load information of a server with a separate protocol.

18. (Currently Amended) The method according to ~~any of the claims 1 – 17~~ claim 1, c h a r a c t e r i s e d in that the service is the DNS service.

19. (Original) A server for network layer load balancing, wherein the server is connected to a communication link with which it receives messages from a router or other servers, wherein the server comprises at least:

a service process (300) providing the service;

c h a r a c t e r i s e d in that the server comprises:

a service-specific anycast address configured to the server interface (314) on the communication link;

monitoring means (304) for monitoring said service process (300) and the service-specific anycast address configured interface (314);

service scheduling means (306) for scheduling the service process (300) and the need for an advertisement message; and

sending means (308) for sending an advertisement message when the service process (300) is able to provide the service.

20. (Original) The server according to claim 19, c h a r a c t e r i s e d in that the server comprises means (304) for enclosing a route cost value suitable for the current situation of the service process (300) in the server.

21. (Original) The server according to claim 19, c h a r a c t e r i s e d in that the server comprises means (304) for enclosing service load information in the advertisement message.

22. (Currently Amended) The server according to ~~any of the claims 19 - 21~~ claim 19, c h a r a c t e r i s e d in that the service in the server is the DNS service.